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Behavior of micro-alloyed steel at thermal treatment

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Abstract

© 2017 Trans Tech Publications, Switzerland. A tendency towards the growth of grain when heating is investigated and the stability against tempering alloyed and microalloyed steel. The advantage steel, microalloyed by vanadium and nitrogen is shown and their application for heavy-duty vehicle parts is recommended. The possibility of residual forging heat of forgings realization for their heat treatment is established.

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Keywords

Forging heat, Grain size, Hardness, Heat stability, Holiday, Microalloying, Steel

References

[1] V. S. Meskin, Alloying bases steel, Metallurgizdat, Moscow, 1959.
[2] N. F. Vyazniki, The alloyed steel, Metallurgizdat, Moscow, 1963.
[3] M. P. Brown, Mikrolegirovannye stali, Naukova thought, Kiev, 1982.
[4] R. Lagneborg, T. Savetski, S. Zayats, B. Hutchinson, Vanadium role in microalloyed the steel, Yekaterinburg, 2001.
[5] N. M. Fonstein, Steel microalloyed by vanadium, Steel, 8 (1990) 48-52.
[6] Problems of production and application steel with vanadium, Yekaterinburg, URO RAN, (2007)
[7] M. Korchinsky, The advanced metallurgical constructional materials and a new role microalloyed steel, Steel, 6 (2005) 124-130.
[8] P. D. Odesskii, L. A. Smirnov, About use of vanadium and niobium in microalloyed the steel for metal designs, Steel, 6 (2005), 116-123.
[9] L. M. Panfilova, L. A. Smirnov, P. S. Mitvell, Probe of influence of vanadium and nitrogen on properties low-carbonaceous steel in sottilmente cold and hot-rolled products, URO RAN, Yekaterinburg, (2007) 365-383.
[10] V. I. Astashchenko, A. I. Shveyov, T. V. Shveyova, Quality control and heredity of a structure became at technological metalrepartition, Academia, Moscow, (2011)
[11] M. A. Tylkin, Reference book of the heat-treater rebuild service, Metallurgy, Moscow, (1981)